

1. ZAREMBOK, G.V.; GOL'YANOVA, V.V.

2. USSR (600)

4. Faucets

7. Stopper spigot for high pressures, G.V. Zarembok, V.V. Gol'yanova, Mast.-zhir.
prom. 18 no. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

ZAREMBOWSKI, Włodzimierz

Peroral cholecystocholedochography. Polski przegl. radiol. 25 no.1:
81-100 '61.

1. Z Zakładu Radiologii Centr. Szpitala Klin. M.S.W. Kier.: doc. dr
W. Trzetrzewinski.

(CHOLECYSTOGRAPHY)

ZAREMBOWSKI, Włodzimierz

A case of polypoid cholesterolosis of the gallbladder. Polski
przegl.radiol. 25 no.3:273-277 My-Je '61.

1. Z Zakładu Radiologii Centralnego Klinicznego Szpitala MSW
Kierownik: doc. dr med. W. Trzetrzewiński.

(GALLBLADDER neopl) (POLYPI radiog)

ZAREMBOWSKI, Włodzimierz

Possibilities and importance of radiophotography in the
diagnosis of thoracic diseases. Wiad. lek. 18 no.14:
1143-1149 15 J1 '65.

1. Z Zakładu Radiologii Centralnego Szpitala Klin.
Ministerstwa Spraw Wewnętrznych (Kierownik: doc. dr. med.
W. Trzetrzewinski) i ze Stacji Radiofotograficznej Poradni
Przeciwegruchliczej Zespołu Profilaktyczno-Leczniczego dla
Studentów (Kierownik: dr. med. W. Zarembowski).

PHILISHENKO, I.A.; HUDAKOV, V.V.; ZAREMBSKIY, R.A.

Possibility of repeated use of zymosan to obtain the serum protein
properdin. Lab.delo 5 no.5:23-25 S-O '59. (MIRA 12:12)

1. Iz kafedry biokhimii (nach. - prof. G.Ye. Vladimirov) Voenno-
meditsinskoy ordena Lenina akademii imeni S.M. Kirova.
(ZYMOSAN) (PROPERDIN)

ZAREMBSKIY, R.A.; IVANOV, I.I.

First All-Union Biochemical Congress and the problems of
modern biochemistry. Usp. sovr. biol. 58 no. 2:307-320
S-O '64. (MIRA 17:12)

IVANOV, I.I.; KREPS, Ye.M.; ZAREMBSKIY, R.A., kand. med. nauk

First All-Union Biochemical Conference. Vest. AN SSSR 34
no.5:144-148 My '64. (MIRA 17:6)

1. Chlen-korrespondent AMN SSSR (for Ivanov). 2. Chlen-
korrespondent AN SSSR (for Kreps).

ZAREMSKI, D.

COUNTRY : Yugoslavia
 CATEGORY : Farm Animals. Cattle.
 ABS. SOUR. : RZhMed., No. 4, 1959, No. 16385
 AUTHOR : Zaremski, Dorian
 INST. : Belgrade University.
 TITLE : The Effect of Antibiotics on the Growth of Calves.
 ORIG. PUB. : Poljoprivrednog Znak. Univerz. Beogradu, 1957, 5, No 1, 117-128
 ABSTRACT : No abstract.

Q-3

CARD:

1/1

ZARENIN, V.A.

Many-layered panels for the roofs of industrial buildings.
Prom. stroi. 41 no.5:18-22 My '64. (MIRA 18:11)

89678

S/187/60/000/006/001/001
A189/A026

6.3000 (1051, 1106, 1138)
AUTHOR: Zarenin, Yu. G.

TITLE: Feedback as a Method of Correcting the Frequency Characteristics of Electromechanical Light Modulators

PERIODICAL: Tekhnika kino i televideniya, 1960, No. 6, pp. 33-44

TEXT: The author analyzes the frequency characteristic of electromechanical light modulators and suggests the use of a feedback method as described by G. V. Braude (Ref. 3). The linear channel of the electromechanical light modulator may be represented by the differential equation:

$$\{Lmp^3 + [Lr + (R_1 + R)m]p^2 + [(R_1 + R)r + LS + M^2]p + (R_1 + R) \cdot S\}x = M \cdot e(1)$$

where: p - differential operator; x - displacement of the mechanical system; e - electromotive force of the power source; m - electromechanical coupling factor; L - inductance of the galvanometer electric circuit; R - effective resistance of the galvanometer electric circuit; m - mass of the galvanometer moving system; r - friction of the galvanometer moving system;

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89678

S/187/60/000/006/001/001
A189/A026

Feedback as a Method of Correcting the Frequency Characteristics of Electro-mechanical Light Modulators

S - elasticity of the galvanometer moving system; and R_i - internal resistance of the power source. Starting with this equation, the author proves the theoretical possibility of applying feedback to control the frequency characteristic of the system. Experimental investigations were conducted with a model, shown in Figure 1, and with a 4A-1 (4D-1) mirror galvanometer produced by the Zavod "Lenkinap" ("Lenkinap" Plant). The model consists of (1) galvanometer, (2) illuminating system, (3) photoelement with slit aperture, (4) preamplifier, (5) instrument for measuring the amplitude of output signal, (6) feedback signal-shaping unit, (7) output amplifier, (8) instrument for measuring the depth of feedback, (9) audio-frequency generator, and (10) unit providing the required modulator feed according to the direct feedback signal. Results of experimental investigations are represented in 8 graphs. Based on these results, the author states that the feedback method permits to control the equation coefficients of the system and it can also be successfully applied to frequency correction of industrial galvanometers. There are 8 graphs, 1 block diagram, 1 circuit diagram, and 4 Soviet references.

Card 2/3

89678

S/187/60/000/006/001/001
A189/A026

Feedback as a Method of Correcting the Frequency Characteristics of Electro- mechanical Light Modulators

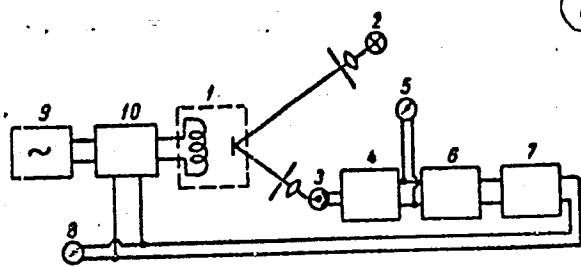


Figure 1:

Block diagram of experimental arrangement

Card 3/3

16.9500

78172
SOV/103-21-3-18/21

AUTHOR:

Zarenin, Yu. G. (Kiev)

TITLE:

On the Theory of Linear Systems of the Third Order

PERIODICAL:

Avtomatika i telemekhanika, 1960, Vol 21, No 3,
pp 417-419 (USSR)

ABSTRACT:

The paper investigates the amplitude-frequency characteristics of linear systems described by the following differential equation of the third order:

$$(Ap^3 + Bp^2 + Cp + D)\varphi = \psi. \quad (1)$$

where p is a differentiation operator; φ is an instantaneous value at the output of the system; ψ is the instantaneous value of the input signal; A, B, C, and D are constant coefficients. After dividing Eq. (1) by A the new coefficients are designated a, b, c, and d, thus obtaining:

$$(p^3 + ap^2 + bp + c)\varphi = d\psi. \quad (2)$$

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On the Theory of Linear Systems of
the Third Order

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Thereby the equation of the amplitude-frequency characteristic is:

$$K(\omega) = \left| \frac{d}{H(j\omega)} \right| = \frac{d}{\sqrt{(c - a\omega^2)^2 + (b\omega - \omega^3)^2}} \quad (3)$$

After a single differentiation of the expression under the root sign in the denominator of Eq. (3), and introducing designations:

$$b^2 - 2ac = N \text{ \& } 2b - a^2 = R, \quad (4)$$

the polynomial:

$$3\omega^3 - 2R\omega^2 + N\omega = 0, \quad (5)$$

is obtained, the roots of which are:

$$\omega_1 = 0, \omega_{2,3,4,5} = \pm \frac{1}{\sqrt{3}} \sqrt{R \pm \sqrt{R^2 - 3N}}. \quad (6)$$

It is shown that in accordance with Eq. (6) three types of frequency characteristics are possible. This is illustrated

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On the Theory of Linear Systems of
the Third Order

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SOV/103-21-3-18/21

in Fig. 1, where the dotted lines indicate the theoretically

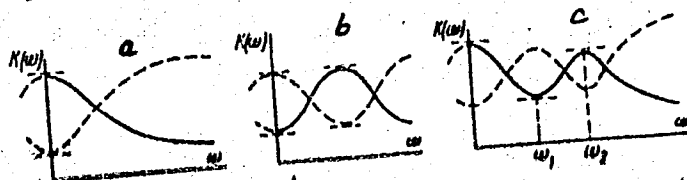


Fig. 1

possible but practically not applicable frequency characteristics. A diagram with N, R coordinates, shown in Fig. 2, is convenient for the practical application of the results obtained. There are 3 figures; and 1 Soviet reference.

SUBMITTED:

September 28, 1959

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On the Theory of Linear Systems of
the Third Order

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SOV/103-21-3-18/21

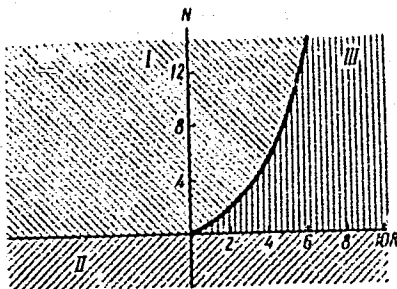


Fig. 2. (I) Region of one extreme; (II) region
of two extremes; (III) region of three
extremes.

Card 4/4

ZARENIN, Yu.G. [Zarenin, IU.H.], starshiy nauchnyy sotrudnik, kand.
tekhn.nauk

Tomorrow of the automation. Nauka i zhyttia 11 no.12:10-11
D '61. (MIRA 15:2)

(Automation)

S/142/62/005/003/004/009
E140/E435

6.9600

AUTHORS:

Geranin, V.A., Zarenin, Yu.G., Karnsvskiy, M.I.

TITLE:

Redistribution of signal probabilities in systems
for the transmission and processing of information

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Radiotekhnika,
v.5, no.3, 1962, 339-346

TEXT: The problem frequently arises of transforming the
probability distribution of a signal in transmission or in
information processing, for example in employing the Monte Carlo
method. The authors attempt to solve the problem of specifying
the transmission characteristics of a converter, given the input
and output probability distributions, for which they know no
published solution. A.I.Kitov and N.A.Krinitzkiy (Elektronnyye
tsifrovyye mashiny i programmirovaniye (Electronic digital
computers and programming), Fizmatgiz, 1959) have attempted to
solve the special case where the input distribution is uniform
but their work is inaccurate. The present work uses the
mathematical apparatus developed in probability theory for the
related problem of the functional transformation of continuous
Card 1/2

✓B

Redistribution of signal ...

S/142/62/005/003/004/009
E140/E435

random quantities, reducing to the determination of the probability distribution of a given random function if the distribution of the argument is known. The solution of the problem is given by a differential equation. Illustrations are furnished by the transformation of "truncated normal" distribution to uniform and the reverse transformation. While the method is not directly applicable to discrete distributions, a method due to A.A.Kharkevich (Ocherki obshchey teorii svyazi. (Outline of a general theory of communications), GITTL, 1955) is recommended. There are 5 figures. VB

ASSOCIATION: Kafedra akustiki i zvukotekhniki, Kiyevskiy ordena Lenina politekhnicheskoy institut (Acoustics and Sound Engineering Department, Kiyev Order of Lenin Polytechnical Institute)

SUBMITTED: November 10, 1960

Card 2/2

YEVTUKHOVA, T.A.; ZARENIN, Yu.G.; MUZYCHUK, V.T.

Method for the realization of the external language of a special-purpose electronic digital computer for the solution of a specific class of logical problems. Avtom. i prib. no. 1:26-30 (MIU 16:12)
O-D '63.

1. Institut avtomatiki Gosplana UkrSSR.

GATKIN, Natan Grigor'yevich, kand. tekhn. nauk; GERANIN, Vsevolod
Aleksandrovich, kand. tekhn. nauk; KARNOVSKIY, Mark Il'ich,
doktor tekhn. nauk; ZARENIN, Yu.G., kand. tekhn. nauk,
retsensent; SKUBCHENKO, S.A., inzh., red.; BEREZOVYY, V.N.,
tekhn. red.

[Integrators in measuring systems] Integratory v sistemakh
izmereniia. Kiev, Gostekhizdat USSR, 1963. 138 p.
(MIRA 17:1)

(Radio measurements) (Radio filters)
(Pulse circuits)

L-38160-65 EST(d)/EEO(OA-2/EED-2/END(1) PA-4/PO-4/PQ-4/PAC-4/PE-4/PSS-2/
 PJ-4/PK-4 TSP(c) EM/GS BOOK EXPLOITATION 18 S/
 AH5604018 8+1

Zarenin, Yuriy Hanrikhovich (Candidate of Technical Sciences);
 Inosov, Viktor Leont'yevich (Doctor of Technical Sciences)

Codes in technology (Kody v tekhnitsi). Kiev, Vyd-vo "Tekhnika",
 1964. 0250 p. illus., biblio. Errata slip inserted. 540 copies
 printed.

TOPIC TAGS: data processing, information processing, digital com-
 puter, information transfer, coding method, transfer, reliabil-
 ity, error detecting code, error correcting code, nonexcess
 binary code, discrete code, analog code, telemetry code, code
 conversion

PURPOSE AND COVERAGE: This book is intended for use by engineers
 working in the field of information processing, telecommunications, telemetry, and computer design. It may also be used
 by scientists in related fields and students in advanced courses
 on these subjects. The book deals with coding and codes in in-
 formation theory, as applied to information processing and trans-
 fer. It emphasizes those encoders that speed up and improve
 information transfer. Available published data on coding theory

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are cited. Chapters I to III deal with the fundamentals of coding theory. The problems, methods, and forms of coding which have been adopted in communications, telemechanics, and computer engineering are described in the remaining chapters.

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1. 03160-65
AM5004018

SUB CODE: DP

SUBMITTED: 10Apr66

MR REF SOV 030

OTHER: 016

FILE
Card 6/6

ZARENIN, Yu.G.; SHCHECHKIN, Ye.S., inzh., red.

[Error correcting codes for the transmission and processing of information] Korrektiruiushchie kody dlia peredachi i pererabotki informatsii. Kiev, Tekhnika, 1965.
169 p. (MIRA 19:1)

L 25647-66 ENT(d)/EEC(k)-2/T/EWP(1) IJP(c) BS/GG

ACC NR: AM6099814

Monograph

UR/

Zarenin, Yuriy Genrikhovich (Candidate of Technical Sciences)

Error-correcting codes for data transmission and processing 160
(Korrektiruyushchiye kody dlya peredachi i pererabotki informatsii)
Kiev, Izd-vo "Tekhnika", 1965. 169 p. biblio., tables.
6300 copies printed.

TOPIC TAGS: data processing, error correcting code, logic circuit,
arithmetic unit, information storage and retrieval

PURPOSE AND COVERAGE: This book is intended for technical personnel concerned with the production and utilization of digital automation systems and computers. It can also be of use to students in advanced correspondence courses of schools of higher education. The book reviews the correcting codes, (i.e., error-detecting and error-correcting codes) as a universal method which can be utilized in designing systems for arbitrary data processing. The concepts of processing and of automation in processing are determined, and ways of describing them are discussed. Error-correcting codes for the three most widely used types of processing, i.e., storage, arithmetic, and logical operations, are reviewed. The theoretical possibilities, the design methods and the quality evaluation of error-correcting

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codes are reviewed. The author thanks Doctor of Technical Sciences
V. L. Inosov for his advice.

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SUB CODE: 09/ SUBM DATE: 21.Oct65/... ORIG REF: 015/ OTH REF: 024/

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L 19457-65 Pb-4 SSD/AFWL/AFETR/AMD/ESD(o)/ESD(ES)

ACCESSION NR: AP3000705

S/0238/04/010/006/0015/0318

AUTHOR: Zarenina, I.L.

TITLE: The effect of television screens on some functions of the visual analyzer

SOURCE: Fizicheskii zhurnal v. 10 no. 9, 1964 815-818

were conducted before and immediately after 3 hours of television viewing, and involved a determination of the time threshold for color differentiation.

As the age increased, the time threshold for color differentiation, after viewing a televised program, decreased. In earlier tests on accommodation, it was shown that younger persons

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L 19457-65

ACCESSION NR: AP5000765

are subject to greater fatigue under the influence of television rays. In attempting to determine the reasons for the increased fatigue of the organs of vision, the author expresses her opinion that the most probable reason is the spectral difference between television rays and sunlight. The data obtained led the author to recommend limitation of television viewing to 6-7 hours/week, particularly in people over 40 years of age who show any central nervous system or eye diseases. Orig. art. has: 1 table.

ASSOCIATION: Klinichna likarnya Lenins'koho rayonu, Kiev (Medical Clinic of Lenins'k District)

SUBMITTED: 17Apr64

ENCL: 00

SUB CODE: LS

NO REF SOV: 004

OTHER: 000

Card 2/2

ZARENKOV, N.A.; 'U VAN LIEU; NGUEN TIEN KAN'

General characteristics of the quantitative distribution of plankton and benthos in the Gulf of Tonkin and the adjacent part of the South China Sea. Dokl. AN SSSR 148 no.6:1389-1391 F '63. (MIRA 16:3)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
Predstavleno akademikom D.I.Shcherbakovym.

(Tonkin, Gulf of--Marine biology)
(South China Sea--Marine biology)

ZARENKOV, N.A.

Notes on some decapod crustaceans (Decapoda, Crustacea) of the
Sea of Okhotsk and the Bering Sea. Trudy Inst. okean. 34:343-350
'60. (MIRA 13:10)

1. Kafedra zoologii bespozvonochnykh Moskovskogo gosudarstvennogo
universiteta.

(Okhotsk, Sea of--Decapoda) (Bering Sea--Decapoda)

ZARENKOV, N.A.

Materials on comparative ecology of decapods in Far Eastern seas. Zool.shur. 39 no.2:188-199 F '60. (MIRA 13:6)

1. Chair of Invertebrate Zoology, Moscow State University.
(Soviet Far East--Decapoda (Crustacea))

MUSIYKO, V.A. [Musiko, V.O.]; ZARETSKAYA, I.V. [Zarets'ka, I.V.]

Serum protein fractions in Brucella infections following roentgen-ray irradiation. Ukr. biokhim. zhur. 36 no.1:46-51 '64.

(MIRA 17:12)

1. Department of Biochemistry of the Pirogov Medical Institute, Odessa.

ZARETSKAS, G.S. [Zareckas, G.]; MATUKONIS, A.V.

Effect of twisting, tension, and time of relaxation on the changes in the torque of rayon multifilament yarns. Izv. vys. ucheb. zav.; tekhn. teks. prom. no.6:18-22 '65.

(MIRA 19:1)

1. Kaunasskiy nauchno-issledovatel'skiy institut tekstil'noy promyshlennosti i Kaunasskiy politekhnicheskiy institut. Submitted August 30, 1965.

83739

S/056/60/038/004/032/048
B006/B056

34.6520

AUTHORS:

Grin', Yu. T., Drozdov, S. I., Zaretskiy, D. F.

TITLE:

The Moments of Inertia of Odd Atomic Nuclei

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,
Vol. 38, No. 4, pp. 1297 - 1303

TEXT: In the regions $150 < A < 190$ and $A > 225$ the atomic nuclei are deformed and, besides single-particle levels, they have also rotational ones. It was found experimentally that the moments of inertia of odd nuclei surpassed those of even nuclei considerably. Several authors have dealt with the derivation of formulas for the moments of inertia of even and odd nuclei, without, however, taking pair correlation into account. The authors of the present paper, for the purpose of determining the moments of inertia (taking pair correlation into account), use the Green functions for a finite system having an odd number of particles. The calculation method is analogous to that used by A. B. Migdal for even-even nuclei (Refs. 3,4). An explicit formula (18) is obtained for δJ , in which the difference of the moments of inertia $J_e(\kappa_e) - J_e(\kappa_0)$

Card 1/2

The Moments of Inertia of Odd Atomic Nuclei ⁸³⁷³⁹
S/056/60/038/004/032/048
B006/B056

occurs as an unknown term (the subscripts e and o mean even and odd).
 $\kappa = \hbar\omega_0/2\Delta$, $\hbar\omega_0 = 41 A^{-1/3}$ Mev. The Δ values are partly known from the
experiment and partly determined by interpolation according to the for-
mula $\Delta_e = \Delta_o + 1/q_o$, where q_o denotes the density of the single-particle
levels near the Fermi surface. For calculating the difference of J_e ,
 Δ_e , Δ_o , β_e , and β_o must be known. These four parameters are given in
Table 1 for a total of 19 nuclei between $^{64}\text{Gd}^{155}$ and $^{96}\text{Cm}^{245}$, as well as
the relative change in the moments of inertia for nuclei having odd num-
bers of neutrons $\delta J/J_T$ (in %). (J_T is the moment of inertia of the solid;
 $\delta J/J_T \sim A^{-1/3}$). Table 2 gives the same parameters for nuclei having odd
numbers of protons (11 nuclei from $^{67}\text{Ho}^{165}$ to $^{95}\text{Am}^{243}$). The authors
thank S. T. Belyayev and A. B. Migdal for discussions. There are
2 tables and 9 references: 4 Soviet, 1 US, 1 Dutch, and 3 Danish.

SUBMITTED: November 17, 1959.

Card 2/2

ALEKSEYEV, Vladimir Ivanovich; ZARETSKIY, I.S.; TYUKOVIN, I.N.;
BOGATOV I.P., retsenzent; BELOV, M.I., retsenzent;
IVANOV, K.A., retsenzent; MEYTEROVICH, M.G., retsenzent;
ORFANOV, I.K., retsenzent; ITOV, S.M., retsenzent;
TONYAYEV, V.I., retsenzent

[Moscow-Gorkiy-Moscow; guidebook on the Moscow Canal,
and the Volga, Oka, and Moscow Rivers] Moskva - Gor'kii -
Moskva; putevoditel' po kanalu imeni Moskvyy, Volge, Oke i
Moskve-reke. Moskva, izd-vo "Transport," 1964. 101 p.
(MIRA 17:6)

ZARENTSKIY, P.A. [Zapets'kiy, P.A.]

Cancer of the corpus uteri; according to materials from the Kharkov Province Oncological Dispensary (1950-1955). Ped., akush. 1 gin. 23 no.6:53-56 '61. (MIRA 15:4)

1. Ginekolog'cheskoye otdeleniye Khar'kovskogo oblastnogo onkologicheskogo dispansera (glavnyy vrach - zasluzhennyy vrach USSR N.G. Stanislavskaya [Stanislavs'ka, N.H.].
(UTERUS--CANCER)

DYATLOVA, V.N.; ZARETSKIY, Ye.N., kand. tekhn. nauk, rotsenzent;
KUBAREV, V.I., inzh., red.

[Corrosion resistance of metals and alloys; a handbook]
Korroziionnaia stoikost' metallov i splavov; spravochnik.
Izd.2., perer. i dop. Moskva, Izd-vo "Mashinostroenie,"
1964. 350 p. (MIRA 17:6)

ZARETSKIY, Ye.Ye.

Methodology for determining the dynamics of economic indices under various growth rates. Trudy LIP no.227:9-14 '63. (MIRA 17:4)

ACCESSION NR: AP4014377

S/0300/64/036/001/0046/0051

AUTHOR: Musiyko, V. O.; Zarets'ka, I. V.

TITLE: Protein fractions of blood serum on infection with the causative factor of brucellosis and irradiation with X-rays

SOURCE: Ukrayins'kyy biokhimichnyy zhurnal, v. 36, no. 1, 1964, 46-51

TOPIC TAGS: irradiation, blood serum, brucellosis, X-ray, alpha sub 1 globulin, alpha sub 2 globulin, electrophoresis, albuminemia, gamma globulin, immunization, brucellosis vaccine

ABSTRACT: The changes in the protein fractions of the blood serum of guinea pigs infected with Br. abortus bovis and subjected to irradiation with X-rays in a dose of 200 r were subjected to an electrophoretic investigation. Infection with brucellosis produced a considerable decrease in the albumin content of the blood serum. Albuminemia also resulted in animals irradiated before or after infection. Infection of the animals or infection preceded or followed by irradiation produced a reduction in the amount of α_1 -globulins and an increase

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ACCESSION NR: APL014377

in the amount of α_2 -globulins. The γ -globulin content increased in the blood serum of animals irradiated before or after infection. The increase in the level of γ -globulins was enhanced by immunization of guinea pigs with live brucellosis vaccine 2 days before irradiation and 30 days before infection with brucellosis. The rate of survival of infected animals after irradiation was increased by immunization. The results obtained are of interest, because irradiation as such, in the absence of infection, reduces the level of γ -globulins in the blood serum. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: Kafedra Biokhimiï Odesskogo Meditsinskogo Instituta imeni Pirogova
(Chair of Biochemistry, Odessa Medical Institute)

SUBMITTED: 22Mar63

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: BC, NS

NO REF SOV: 005

OTHER: 000

Card 2/2

ZARETSKAS, G.S. [Zareckas, G.]

Type SD-4 instrument for determining the torsion characteristics of textile fibers. Izv. vys. ucheb. zav.; tekhn. tekst. prom. no.2: 23-27 '65. (MIRA 18:5)

1. Kaunasskiy nauchno-issledovatel'skiy institut tekstil'noy promyshlennosti.

BUDRIS, A.Ye.; ZARETSKAS, V.S., inzh.

New method of testing the supporting surface of fabrics. Tekst.prom.
21 no.5:77-79 My '61. (MIRA 15:1)

1. Zaveduyushchiy laboratoriyey voloknistykh materialov Instituta
energetiki i elektrotekhniki AN Litovskoy SSR (for Budris).
(Textile fabrics--Testing)

KLESHCHEVICH, N.F. [deceased]; ZARETSKAYA, A.D.

Solar heating of seeds reduces disease incidence in wheat.
Zashch. rast. ot vred. i bol. 5 no.9:25 S '60. (MIRA 15:6)
(Wheat--Diseases and pests)
(Solar heating).

VOLODARSKIY, R.F.; ARONOV, V.I.; D'YAKONOV, Ye.G.; SHIRIKOV, V.P.;
FEDYNSKIY, V.V., doktor fiz.-mat. nauk, prof., red.;
ZARETSKAYA, A.I., ved. red.; BASHMAKOV, G.M., tekhn. red.

[Use of electronic calculating machines to interpret gravity
and magnetic fields]Primenenie elektronno-schetnykh mashin dlia
interpretatsii gravitatsionnykh i magnitnykh polei. Pod red.
V.V.Fedynskogo. Moskva, Gostoptekhizdat, 1962. 74 p.

(MIRA 15:9)

(Electronic calculating machines) (Gravity)
(Magnetic anomalies)

EROD, Ignatiy Osipovich; VYSOTSKIY, I.V., red.; LEVINSON, V.G.,
red.; ZARETSKAYA, A.I., ved. red.

[Fundamentals in the study of oil- and gas-bearing basins]
Osnovy ucheniya o neftegazonosnykh bassainakh. Moskva, Izd-
vo "Nedra," 1964. 58 p. (MIRA 17:5)

IVANOVA, Z.P., red.; ZARETSKAYA, A.I., vod. red.; POLOSINA, A.B.,
tekhn. red.

[Stratigraphic scale of Paleozoic sediments; transactions] Stra-
tigraficheskie skhemy paleozoiskikh otlozhenii; trudy. Kodevon.
Pod red. Z.P.Ivanovoi. Moskva, Gostoptekhizdat, 1962. 132 p.

(MIRA 15:6)

1. Soveshchaniye po utochneniyu unifitsirovannykh stratigraficheskikh
skhem paleozoya Volgo-Ural'skoy neftegazonosnoy provintsii, Moscow,
1960.

(MIRA 15:6)

(Geology, Stratigraphic)

RIVKIN, Il'ya Yakovlevich; ZARETSKAYA, A.I., ved. red.

[Automatic logging stations; on a compound cable] Avto-
matische kharotazhnye stantsii; na mnogozhil'nom kabele.
Moskva, Nedra, 1964. 275 p. (MIRA 17:12)

ISKANDEROV, Mamed Abdul ogly; MIRCHINK, M.F., red.; ZARETSKAYA,
A.I., ved. red.; STAROSTINA, L.D., tekhn. red.

[Efficient development of gas-condensate fields; based on
an analysis of the development of gas-condensate oil fields
of the Apsheron Peninsula] Ratsional'naya razrabotka gazokon-
densatnykh mestorozhdenii; na opyte analiza razrabotki gazo-
kondensatnykh i gazokondensatno-neftnykh mestorozhdenii
Apsheronskogo poluostrova. Moskva, Gostoptekhizdat, 1963. 58 p.
(MIRA 16:10)

1. Chlen-korrespondent AN SSSR (for Mirchink).
(Apsheron Peninsula--Condensate oil wells)

KOMAROV, Sergey Grigor'yevich; MUKHER, A.A., retsenzent; YUNGENS, S.M., ved. red.; ZARETSKAYA, A.I., ved. red.; POLOSINA, A.S., tekhn. red.

[Geophysical methods for well surveying] Geofizicheskie metody issledovaniia skvazhin. Moskva, Gostoptekhnizdat, 1963. 407 p. (MIRA 17:1)

1. Glavnyy spetsialist Upravleniya geofizicheskikh rabot Glavnogo upravleniya geologii i okhrany neдр pri Sovete Ministrov RSFSR (for Mukher).

IL'INA, Agniya Petrovna; ZARETSKAYA, A.I., vedushchiy red.;
POLOSINA, A.S., tekhn. red.

[Neogene mollusks in Kamchatka] Molluski neogena Kamchatki.
Moskva, Gostoptekhnizdat, 1963. 241 p. (Leningrad, Vsesoiuznyi
neftianoi nauchno-issledovatel'skii geologorazvedochnyi
institut. Trudy, no.202). (MIRA 16:6)

(Kamchatka--Mollusks, Fossil)

ROZANOV, Leonid Nikolayevich; OVANESOV, Gurgan Pavlovich; AKSENOV, Adol'f Alekseyevich; NADEZHDIN, Aleksandr Danilovich; ZARETSKAYA, A.I., ved. red.; DUBROVSKAYA, L., tekhn. red.

[Method for rating producible and prospective reserves of oil and gas in platform areas as exemplified by the studies carried out in the Bashkir A.S.S.R.] Metodika otsenki perspektivnykh i prognoznykh zapasov nefti i gaza platformnykh oblastei (na primere Bashkirskoi ASSR). Moskva, Gos-
toptekhnizdat, 1963. 81 p. (MIRA 16:11)

(Bashkiria--Petroleum geology)
(Bashkiria--Gas, Natural--Geology)

VENDEL'SHTEYN, Boris Yur'yovich; LARIONOV, Vyacheslav Vasil'yovich;
DAKHNOV, V.N., prof.; ZARETSKAYA, A.I., ved. red.

[Using the data of field geophysics in estimating gas and
oil reserves] Ispol'zovanie dannyykh promyslovoi geofiziki
pri podschete zapasov nefti i gaza; metodicheskoe rukovod-
stvo. Moskva, Izd-vo "Nedra," 1964. 197 p.

(MIRA 17:6)

FADEYEV, Mikhail Ivanovich; ZARETSKAYA, A.I., ved. red.; YAKOVILEVA,
Z.I., tekhn. red.

[Orekhovka key well (Kuybyshev Province)] Orekhovskaya opor-
naya skvazhina; Kuibyshevskaya oblast'. Moskva, Gostoptekh-
izdat, 1963. 90 p. (MIRA 16:7)
(Kuybyshev Province--Petroleum geology)

BELOVA, M.B.; VASIL'YEV, V.G.; VLASOV, G.M.; GRYAZNOV, L.P.; DRABKIN, I.Ye.; ZHEGALOV, Yu.V.; KARBIVNICHIIY, I.N.; KLENOV, Ye.P.; KRYLOV, V.V.; TITOV, V.A.; ZARETSKAYA, A.I., vedushchiy red.; ZBDOTOVA, I.G., tekhn. red.

[Geology and oil and gas potentials of Kamchatka] Geologicheskoe stroenie i perspektivy neftegazonosnosti Kamchatki. Moskva, Gos. nauchno-tekhn. izd-vo nef. i gorno-toplivnoi lit-ry, 1961. 343 p.
(MIRA 14:9)

(Kamchatka--Petroleum geology)
(Kamchatka--Gas, Natural--Geology)

FEDYNSKIY, V.V., doktor fiziko-matem. nauk, red.; LEVINSON, V.G., kand. geol.-mineral. nauk, red.; TOPCHIEV, A.V., akad. NAGIYEV, M.F., akad., red.; SHUYKIN, N.I., red.; MIRCHINK, M.P., red.; TREBIN, P.A., doktor tekhn. nauk, red.; SANIN, P.I., doktor khim. nauk; SUKHANOV, V.P., inzh., red.; PANOV, V.V., kand. tekhn. nauk, red.; KONEV, A.G., vedushchiy red.; ZARETSKAYA, A.I., vedushchiy red.; FEDOTOVA, I.G., tekhn. red.

[Reports of the International Petroleum Congress. 5th New York, 1959] Doklady V Mezhdunarodnogo neftianogo kongressa, New York, 1959. Moskva, Gos. nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry. Vol.1. [Geology and geophysics] Geologiya i geofizika. Pod red. V.V. Fedynskogo i V.G.Levinsona. 1961. 382 p. (MIRA 14:9)

1. International Petroleum Congress. 5th, New York, 1959. 2. AN Azerbaydzhanskoy SSR (for Nagiyev). 3. Chleny-korrespondenty AN SSSR (for Shuykin, Mirchink).

(Petroleum geology) (Gas, Natural—Geology)
(Prospecting—Geophysical methods)

VASIL'YEV, V.G., red.; ZARETSKAYA, A.I., vedushchiy red.; MUKHINA, E.A.,
tekhn. red.

[Geophysical prospecting in studying the geology of Eastern
Siberia; articles on geophysical investigations] Geofizicheskie ra-
boty pri reshenii geologicheskikh zadach v Vostochnoi Sibiri; sbornik
statei po geofizicheskim issledovaniyam. Pod red. V.G.Vasil'eva.
Moskva, Gos.nauchno-tekhn.izd-vo nefi.i gorno-toplivnoi lit-ry, 1961.
230 p. (MIRA 14:6)

1. Russia(1917- R.S.F.S.R.)Glavnoy geologicheskoye upravleniye.
(Siberia, Eastern--Prospecting--Geophysical methods)

PETROV, N.A., red.; PETRENKO, L.I., red.; SAVITSKIY, P.S., red.; SINITSIN, V.I., red.; KOLOTYRKIN, Ya.M., red.; SYRKUS, N.P., red.; ROHM, R.F., red.; AMYSHEV, P.I., red.; VARTAZAROV, S.Ye., red.; ZAYTSEV, A.I., red.; ZEZYULINSKIY, V.M., red.; ZEDGINIDZE, G.A., red.; MARTYINKIN, F.F., red.; ROGACHEV, V.I., red.; SLATINSKIY, A.N., red.; LEVINA, Ye.S., vedushchiy red.; TITSKAYA, B.F., vedushchiy red.; PERSHINA, Ye.G., vedushchiy red.; IONEL', A.G., vedushchiy red.; ZARETSKAYA, A.I., vedushchiy red.; MUKHINA, E.A., tekhn.red.

[Transactions of the Conference on the Introduction of Radioactive Isotopes and Nuclear Radiation into the National Economy of the U.S.S.R.] Trudy Vsesoiuznogo soveshchaniia po vnedreniiu radioaktivnykh izotopov i iadernykh izlucheniĭ v narodnoe khoziaistvo SSSR. Pod red. N.A.Petrova, L.I.Petrenko i P.S.Savitskogo. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry. Vol.1. [General aspects of isotope applications. Instruments with sources of radioactive radiation. Radiation chemistry. Chemical and petroleum refining industry]

(Continued on next card)

PETROV, N.A.---(continued) Card 2.

Obshchie voprosy primeneniia izotopov. Pribory s istochnikami radioaktivnykh izlucheni. Radiatsionnaia khimiia. Khimicheskai i neftepererabatyvaiushchaia promyshlennost'. 1961. 340 p. Vol.2. [Construction and the industry of construction materials. Light industry. Food industry and agriculture. Medicine] Stroitel'stvo i promyshlennost' stroitel'nykh materialov. Legkaia promyshlennost'. Pishchevaia promyshlennost' i sel'skoe khoziaistvo. Meditsina. 1961. 267 p.

(MIRA 14:4)

1. Vsesoyuznoye soveshchaniye po vnedreniyu radioaktivnykh izotopov i yadernykh izlucheni v narodnoye khozyaystvo SSSR. Riga, 1960.

(Radioisotopes)

(Radiation)

PER'KOV, E.A., red.; ZARETSKAYA, A.I., ved. red.

[Album of theoretical curves for electric oil well logging] Al'bom teoreticheskikh krivyykh elektricheskogo karotazha skvazhin. Moskva, Nedra, 1964. 17 p.
(MIRA 18:4)

IVANOVA, R.M.; ASHRAFI, R.I.; BURIXOVA, Ye.M.; VITTENBERG, Z.V.;
ZARETSKAYA, A.R.; NAZAR'YEVA, M.S.; RAFIYENKO, D.V.; BURAKOVA,
G.Ye.; KUTSENKO, I.T.; KAS'YANOVA, Ye.M.; PERSHIN, S.P., inzh.

Observations on the stability of track. Put' i put.khoz.
no.10:6-7 0 '59. (MIRA 13:2)

1. Studenty Moskovskogo instituta inzhenerov zheleznodorozh-
nogo transporta (for all except Pershin).
(Railroads--Track)

ZARETSKAYA, D.I.

Flanning of sections for cultivating *Rhizopus fungus*
by the surface method. Spirt.prom. 26 no.4:19-21
'60. (MIRA 13:8)

(Molds (Botany))

ZARETSKAYA, D.I.

Growing the mold *Aspergillus crysae* by the surface streaking
method. Spirt. prom. 25 no.5:23-25 '59. (MIRA 12:10)
(Molds (Botany))

ZARETSKAYA, G.B.; POLIAK, V.E.

"Preventive hygienic supervision of the planning and construction
of Soviet cities and the provision of public facilities" by K.G.
Beriushv. Reviewed by G.B. Zaretskaia, V.E. Poliak. Sig. 1 san. 24
no.4:90-92 Ap '59. (MIRA 12:7)
(SANITATION)

ZARETSKAYA, G.M. (Leningrad); MEL'NICHEKO, A.A. (Leningrad); FILONENKO,
~~N. Ye.~~ (Leningrad)

Investigating silicon carbide formed during the smelting
of iron-silicon-chromium alloys. Izv. AN SSSR. Met. 1 gor.
delo no.4:58-62 J1-Ag '64. (MIRA 17:9)

FILONENKO, N.Ye.; ZARETSKAYA, G.M.

Silicon carbide and ferrosilicochrome. Zhur. prikl. khim. 38 no.4:
941-942 Ap '65. (MIRA 18:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut abrazivov i
shlifovaniya.

ZARITSKAYA G.P.

7. Synthesis of polyene compounds related to steroids.
XVI. Condensation of furan derivatives with
Zaritskaya's reagent.

H. L. H.

ZARETSKAYA, I. I.

Mos., Acetylene Lab., Inst. Organic Chemistry, Dept. Chem. Sci., Acad. Sci.,

-1940-c49-.

"Acetylene Derivatives: On the Isomerization of Tertiary Vinylethynylcarbinols,"

Iz. Ak. Nauk SSSR, Otdel. Khim. Nauk, No. 3, 1940;

"....XVII. Hydration of Hydrocarbons of the Divinylacetylene Series," *ibid.*,

No. 1, 1941;

"....XXVII. Hydration of Divinylacetylene," *ibid.*, No. 4, 1942;

"....XXXVI. On the Mechanism of Cyclohydration of Hydrocarbons of Divinylacetylene

Series. Cyclization of Allyl Isopropenyl Ketone to 1,3-Diethylcyclopentene-1-

One-5," *ibid.*, No. 1, 1944;

"....XLVIII. The Mechanism of Hydration and Cyclization of 5-Methyl-1, 5

Heptadiene-3-ine," *ibid.*, No. 5, 1946;

Derivatives of acetylene. XXVII. Hydration of divinylacetylene. I. N. Nazarov and I. I. Zaretikaya. *Bull. Acad. Sci. U.R.S.S., Chem. Sci., 1962, 20-9* (English summary); cf. C.A. 58, 4599, 6183. —Hydration of divinylacetylene in 80% MeOH, in the presence of small amounts of concd. H₂SO₄ and Hg sulfate, at 60-65° yields a no. of products, as follows: CH₃CH=CHCO₂Me, bp 37-40°, n_D²⁰ 1.4702, d₄²⁰ 0.9478 (hydrogenation over Pt oxide gives Me₂CH₂CH₂CO₂Me, b. 120-5°, n_D²⁰ 1.4702, d₄²⁰ 0.9478); 2-methyl-3-hydroxy-1,4-pyrone, b. 137-5-8.5°, n_D²⁰ 1.4450, d₄²⁰ 1.0229 (semicarbazone, m. 199-70°); 1-methoxy-3-hydroxy-1,4-pyrone, b. 68-9°, n_D²⁰ 1.4518, d₄²⁰ 0.9468 (hydrogenation over Pt oxide gives 2-methoxy-3-hydroxy-1,4-pyrone, b. 68-9°, n_D²⁰ 1.4183, d₄²⁰ 0.9658, and 1-hydroxy-3-methoxy-1,4-pyrone, b. 83-4°, n_D²⁰ 1.4260, d₄²⁰ 0.9658, and 1-hydroxy-3-methoxy-1,4-pyrone, b. 98-100.5°, n_D²⁰ 1.4420, d₄²⁰ 1.0225. The MeCO ketones heated with strong acids in catalytic amounts lose MeOH and give low yields of the corresponding unsatd. derivs. Thus, the methoxyhexanone yielded vinyl allyl ketone, bp 33-5°, n_D²⁰ 1.4730, and the dimethoxyhexanone gave 2-methyldivinyl ketone, bp 33-42°, n_D²⁰ 1.4600. Vinyl allyl ketone, after repeated distn., was obtained in pure state, bp 30-1°, n_D²⁰ 1.4725, d₄²⁰ 0.8907; it polymerizes on standing to a hard glasslike solid; hydrogenation of the monomer yields EtCOH, bp 30-31°, n_D²⁰ 1.4725, d₄²⁰ 0.8907. Similar results were obtained by using the crude or purified hydro- products of divinylacetylene listed above, the latter treated with dry HCl at 80° gave vinyl 2-chloropropyl ketone, bp 65-70°, n_D²⁰ 1.4748, which, heated with Na₂CO₃ in aq. Me₂CO, gave 2-methyldivinyl ketone, bp 33-4°, while simple heating with H₂O gave the methyltetrahydro-2-methylvinylethynylketone, heated with 10% H₂SO₄ and Hg sulfate at 80-90° also gave 2-methyltetrahydro-

1,4-pyrone. Apparently, vinyl allyl ketone is the first used. XXVIII. Condensation of vinylacetylene with divinylacetylene. I. N. Nazarov and O. I. Ver- khotov. *Ibid.* 237-37. —Methylethyl(vinylethynyl)-carbinol (120 g.) was added to 120 g. benzene and 8.5 g. FeCl₃ and stirred for 3.5 hrs. at room temp. fol- lowed by heating for 8 hrs. at 60-65° and 4 hrs. at 75-80°; there was obtained 82.5 g. unreacted carbinol and 34.5 g. 1,3-dimethyl-1,3-dicyl-4-vinyl-1,3-dihydroisobenzofuran, bp 117°, n_D²⁰ 1.5332, d₄²⁰ 0.9663; the product heated with FeCl₃ at 60-70° polymerized to a hard transparent mass, while hydrogenation gave 1,3-dimethyl-1,3-dicyl-4-vinyl-1,3-dihydroisobenzofuran, bp 113.5°, n_D²⁰ 1.5042, d₄²⁰ 0.9468; bromination with Br in CHCl₃ yields the 4-(1,3-dibromo-2-methyl-1,3-dicyl-4-vinyl-1,3-dihydroisobenzofuran) analog, m. 83.5-4° (from EtOH). Analogously, methylpropyl(vinylethynyl)carbinol yielded 1,3-dimethyl-1,3-dicyl-4-vinyl-1,3-dihydroisobenzofuran, bp 116°, n_D²⁰ 1.5180, d₄²⁰ 0.9472, which, similarly, polymerized with FeCl₃ and yielded, with H₂, 1,3-dimethyl-1,3-dicyl-4-vinyl-1,3-dihydroisobenzofuran, bp 116°, n_D²⁰ 1.4991, d₄²⁰ 0.9334. Similarly, 1-(vinylethynyl)cyclohexanol gave 1,3-dipentamethylene-4-vinyl-1,3-dihydroisobenzofuran, bp 124° (from EtOH), which on hydrogenation over Pt oxide gave 1,3-dipentamethylene-4-vinyl-1,3-dihydroisobenzofuran, bp 91.5-2° (from EtOH). Similarly, methyl(vinylethynyl)carbinol gave 1,3-dimethyl-4-vinyl-1,3-dihydroisobenzofuran, bp 80°, n_D²⁰ 1.5450, d₄²⁰ 1.0060, which polymerizes to a solid with H₂O₂, while hydrogenation over Pt oxide gave 1,3-dimethyl-4-vinyl-1,3-dihydroisobenzofuran, bp 80°, n_D²⁰ 1.5151, d₄²⁰ 0.9858. XXIX. Condensation of phenols with the alcohols of the acetylene and vinylacety- ene series. I. N. Nazarov and A. I. Kuznetsova. *Ibid.* 392-405. —Methylethyl(vinylethynyl)carbinol (I) (130 g.) was added, at 40°, to 95 g. FeOH and 60 g. H₂PO₄ (d. 1.71) and stirred at 40-50° for 10 hrs. to yield 20.7 g.

[illegible]

2066758A/021
NAZAROV, I.N.; KAZITSYNA, I.A.; ZABITSKAYA, I.I.

Absorption spectrum analysis of 2,4-dinitrophenylhydrazones of carbonyl compounds. Zhur. ob. khim. 27 no.3:606-623 Mr '57. (MLRA 10:6)

1. Institut organicheskoy khimii Akademii nauk SSSR.
(Hydrazones--Spectra) (Carbonyls)

ZARETSKAYA I. I.

NAZAROV, I. N. ZARETSKAYA, I. I.

Structure of the hydration products of divinylacetylene hydrocarbons.
Zhur. ob. khim, 27 no.3:624-646. Nr '57. (MIRA 10:6)

1. Institut organicheskoy khimii Akademii nauk SSSR.
(Vinyl compounds) (Hydrocarbons)

ZARETSKAYA, I. I.

USSR/Chemistry - Acetylene, Derivatives
Chemistry - Olefins, Hydration of

Apr 48

"Acetylene Derivatives: No 65, Mechanism of the Hydration and Cyclization of
of Dienes," I. N. Nazarov, I. I. Zaretskaya, Inst Org Chem, Acad Sci USSR,
9 3/4 pp

"Zhur Obshch Khim" Vol XVIII (LXXX), No 4

5-Methyl-1, 5-octadiene-3-in and 5-ethyl-1, 5-heptadiene-3-in are readily hydrated
inaqueous solutions of methanol in the presence of sulfuric acid and mercury sulfate,
forming 5-methyl-1, 5-octadiene-4-on and 5-ethyl-1, 5-heptadiene-4-on. Both of these
are readily cyclized by phosphoric or hydrochloric acid at 60 - 65°, forming the
corresponding cyclopentanones. The latter can also be prepared directly from
dienins by cyclohydration. Submitted 7 Apr 1947.

PA 8/19 TL0

ZARITSKAYA, I. I.

"Hydration of Hydrocarbons of the Divinyl-Acetylene Series and Cyclization of Vinyl Allylketones Into Cyclopentenones."

Thesis for degree of Cand. Chemical Sci. Sub. 28 Apr 49,
Inst of Organic Chemistry, Acad Sci, USSR

Summary 82, 18 Dec 52, Dissertations Presented For Degrees in Science and Engineering in Moscow in 1949.
From Vechernyaya Moskva, Jan-Dec 1949.

ZARETSKAYA, I. I.

USSR/Chemistry-Acetylene, Derivatives
Chemistry-Hydration

Mar/Apr 49

"Acetylene Derivatives: No 87, Mechanism of Diene Hydration and Cyclization,
XVII, Hydration and Cyclization of 5-Propyl-1, 5-Octadiene-3-ene,"
I. N. Nazarov, I. I. Zaretskaya, Inst of Org Chem, Acad Sci USSR, 6 pp

"Iz Ak Nauk SSSR, Otdel Khim Nauk" No 2

Describes hydration of 5-propyl-1, 5-octadiene-3-ene into 5-propyl-1,
5-octadiene-4-one and cyclization of this dienone into 3-methyl-2-ethyl-
1-propyl-1-cyclopentene-5-one. Submitted 20 Mar 48.

PA 43/49T10

ZARETSKAYA, I. I.

USSR/Chemistry-Acetylene, Derivatives
Chemistry-Hydration

Mar/Apr 49

"Acetylene Derivatives: No 38, Mechanism of Diene Hydration and Cyclization, XVII, Hydration and Cyclization of 5-Methyl-1, 5-tetradecadiene-3-ine," I. N. Nazarov, I. I. Zaretskaya, Inst of Org Chem, Acad Sci USSR, 6 pp

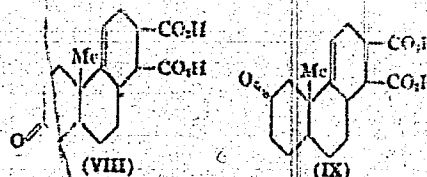
"Iz Ak Nauk SSSR, Otdel Khim Nauk" No 2

Describes hydration of 5-methyl-1, 5-tetradecadiene-3-ine into 5-methyl-1, 5-tetradecadiene-4-on and cyclizes the latter into 1,3-dimethyl-2-octyl-1-cyclopentene-5-on. Submitted 20 Mar 48.

PA 43/49T9

PhNEt, 2.5 hrs. at 200-70° yielded after repeated distn. 44% mixed 8a-methyl-6-methoxy- Δ^8 -octahydro-1-naphthalenone (IA) and 8a-methyl-7-methoxy- Δ^8 -octahydro-1-naphthalenone (II), b. 92-6°. IA semicarbazone (provisionally characterized), m. 208-9.5°. Hydrogenation of mixed IA-II over Pd in dioxane gave 8a-methyl-7-methoxydecahydro-1-naphthalenone, b. 89-91°, n_D²⁰ 1.4892, d₄ 1.039; semicarbazone, m. 199-202° (decomp.). To 7 g. Na in 300 ml. liquid NH₃ was added over 2 hrs. C₂H₂ at 20 l./hr., then 10.7 g. mixed IA-II in Et₂O, the C₂H₂ flow continued 9 hrs., 20 g. NH₄Cl added, and the mixt. allowed to stand overnight; treatment with H₂O and extr. with Et₂O gave 2 g. 1-ethynyl-8a-methyl-6-methoxy- Δ^8 -octahydro-1-naphthal (III), m. 123-3.5° (from CHCl₃). The mother liquor gave 6 g. mixed III and its 7-MeO isomer, b. 119-21°, n_D²⁰ 1.5203. The use of K or Li failed to give better results. Shaking III in Et₂O 2 hrs. with 8% HCl gave 100% 1-ethynyl-8a-methyl-1-hydroxydecahydro-6-naphthalenone (IV), m. 155-6°. To 17 g. Na in 850 ml. liquid NH₃ was added 40 l. C₂H₂ in 1 hr., and, with a reduced rate of C₂H₂ flow, the mixt. was treated with 80 g. mixed IA-II in 250 ml. Et₂O, the passage of C₂H₂ continued 6 hrs., and the mixt. kept overnight at -70°, treated with C₂H₂ 5 hrs., allowed to warm to -35°, treated with 60 g. powd. NH₄Cl, allowed to evaporate; the residue, after addn. of Et₂O, was treated with ice H₂O, and the condensed layer treated with 100 ml. 1% HCl and stirred 3 hrs., yielding 34-9 g. IV, m. 158° (from EtOH or C₆H₆). The mother liquor treated with petr. ether gave 6-8 g. 7-oxo isomer of IV, m. 144° (from EtOH); the residue (13-16 g.) was a mixt. of the 2 substances, b. 134-6°, n_D²⁰ 1.5230. Hydrogenation of IV over PtO₂ in EtOH gave the 1-ethyl analog, m. 127-8°; the other isomer similarly gave 1-ethyl-8a-methyl-1-hydroxydecahydro-7-naphthalenone, m. 86°. Hydrogenation of IV in dioxane over Pd (1 mole H₂ absorbed) gave a viscous mass, crystg. very slowly; the pure 1-ethyl analog of IV m. 111-12° (from petr. ether). The 1-ethyl-8a-methyl-1-hydroxydecahydro-7-naphthalene (V), m. 114-15°, crystd. rapidly. Dehydration of these over

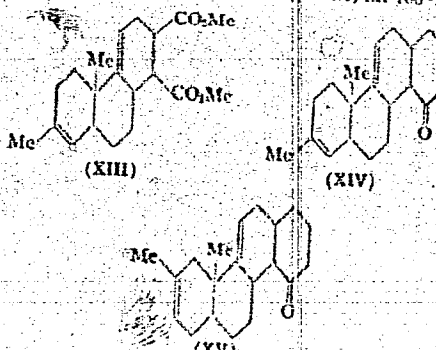
KHSO₄ in the presence of pyrogallol at 140-50°/40-5 mm. gave, resp. 67% 1-ethyl-8a-methyl- Δ^8 -octahydro-6-naphthalenone (VI), b. 114-17°, b. 100-3°, n_D²⁰ 1.5260, d₄ 1.022 (semicarbazone, m. 174.5-6.5° (from EtOH)), and 74% 1-ethyl-8a-methyl- Δ^8 -octahydro-7-naphthalenone (VII), b. 91-6°, n_D²⁰ 1.5270 (semicarbazone, m. 195-7°). Hydrogenation of mixed IV and its 7-oxo isomer over Pd gave some 30% V, and dehydration of the residue gave 40% mixed VI-VII. VI reacted spontaneously with maleic anhydride and treatment of the product with alc. aq. KOH, followed by acidification, gave the previously described dicarboxylic acid (VIII), m. 230-2.5°. VII similarly gave the dicarboxylic acid (IX), decomp. 203°, becoming transparent only at 210°. V (2 g.), 10 ml. MePh, and 0.05 g. powd. KOH



heated 0.5 g. at 110° gave C₂H₂ and a trace of 8a-methyl-1,6-dioxodecahydronaphthalene, m. 61-2°. To MeMgBr (from 13 g. 1-bromobenzene) was added in 10 min. at 5-10° 5 g. VI and the mixt. refluxed 5 min.; after decompn. with ice and 20% HCl, the g. layer gave 90% 1-ethyl-6,8a-dimethyl- Δ^8 -octahydro-6-naphthal (X), b. 91-4°, n_D²⁰ 1.5260. Similarly was obtained 37% 1-ethyl-7,8a-dimethyl- Δ^8 -octahydro-7-naphthal (XI), b. 92-6°, n_D²⁰ 1.5233. Dehydration over KHSO₄ in the presence of pyrogallol at 140-50°/45 mm. gave, resp., 60% 1-ethyl-6,8a-dimethyl- Δ^8 -hexahydronaphthalene (XII), b. 6-2°, n_D²⁰ 1.5240, d₄ 0.949, and 1-ethyl-7,8a-dimethyl- Δ^8 -hexahydronaphthalene (XIIIa), b. 68-70°, n_D²⁰ 1.5220. (5.8 g.) heated with 15 g. di-Me maleate 6 hrs. at 100° followed by removal of unused ester in

vacuo and heating the residue with KHSCl_4 and little pyrogallol 0.25 hr. at $169-70^\circ/25$ mm. gave 4.3 g. XIII, b. $165-70^\circ$, n_D^{20} 1.5200, which, heated 3 hrs. with aq. alc. NaOH, gave the free acid, does not m. 260° . XI heated similarly gave the corresponding ester (not characterized) but hydrolysis of the latter gave only a viscous mass. The free acid of XIII heated in a N atm. with Pd-C in C_{10}H_8 11

hrs. at 370° reacted incompletely and yielded but 84 mg. 2-methylphenanthrene, m. $57-58^\circ$. Dehydrogenation of the viscous isomeric acid failed to yield a solid product. Heating 1.3 g. XII and 3.1 g. 2-cyclohexen-1-one in CO_2 in an ampul 4 hrs. at 220° gave 0.6 g. crude ketone (XIV), b. $150-5^\circ$, which was used in this work. Similarly XIII gave crude ketone (XV), b. $145-53^\circ$, which was used in this state. Heating 0.6 g. XIV in 3 ml. $\text{O}(\text{CH}_2\text{CH}_2\text{OH})_2$ with 0.4 g. NaH, H_2O 6 min., then with 0.4 g. Na in 10 ml. $\text{O}(\text{CH}_2\text{CH}_2\text{OH})_2$ 19 hrs. at 140° and 3 hrs. at 220° , extr. of the diid. mixt. with Et_2O , evapn. of the washed ext., and heating the residue with Pd-C in C_{10}H_8 6 hrs. at 370° in a N atm. gave 14 mg. 2-methylchrysene, m. $222-3^\circ$ (picrate, m. $145.5-6.0^\circ$). Similarly 1.2 g. XV gave 0.45 g. crude product, b. $126-30^\circ$, dehydrogenated as above to 15 mg. 2-methylchrysene, m. $160-9^\circ$ (picrate, m. $160-1^\circ$).



ZARITSKAYA, L. L.

Reaction mechanism of the epoxidation by means of
peracetic acid of unsaturated aliphatic ketones
in the presence of hydrogen peroxide and LiCl
in the presence of LiClO₄ and LiClO₃

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MARTIN, J. I.

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This mechanism of the cyclization reaction by means of deuterium. II. I. N. Nazarov, I. I. Zvereva, Z. N. Parina, and D. N. Kuznetsov, Izv. Akad. Nauk S.S.S.R. Otdel. Khim. Nauk 1953, 519-23; cf. C.A. 48, 3271c. It was previously shown that cyclization of 2-methyl-1,5-hexadien-3-one in D-enriched H_2PO_4 results in the entry of D into the cyclopentenone deriv., indicating the correctness of the ionic nature of the reaction as proposed by Nazarov (C.A. 48, 611d), in which in the initial step D^+ adds to the terminal C of the allyl group. The location of the D in the product was now investigated. The deuterio-2,4-dimethyl-2-cyclopenten-1-one, obtained as described above, was ozonized, yielding $HO_2CCHMeCH_2CO_2H$, which contained substantially all the D that was present in the cyclopentenone. Thus the presence of D on the 1-, 2-, 3-, or 6-positions is excluded. Oxidation of the cyclopentenone with SeO_2 gave D-free 2,4-dimethyl-2-cyclopenten-1,5-dione, m. 61-3°. Hence D must be present in the 5-position, i.e. the methylene group adjacent to the carbonyl. This shows that the cyclization is entered not by $CH_2:CHCH_2COCMe:CH_2$, but by its isomer, $MeCH:CH-COCMe:CH_2$. No exchange of D occurs between the cyclopentenone deriv. and $AcOH-AcOD$. G. M. K.

ZARETSKAYA, I. I.

USSR/Chemistry - Synthesis

Card 1/1 : Pub. 40 - 18/22

Authors : Nazarov, I. N.; Zaretskaya, I. I.; Verkholetova, G. P.; and Torgov, I. V.

Title : Synthesis of steroid compounds and their substances. Part 19.-

Periodical : Izv. AN SSSR. Otd. khim. nauk 5, 920-928, Sep-Oct 1953

Abstract : The realization of a complete synthesis of D-homosteroid diketones of the cis-cis series (with keto-group in position 15), through the condensation of 1-vinyl-9-methyl- Δ^1 -6-octalone with 1-methyl- Δ^1 -cyclohexene-6-one, is described. The four isomeric tetracyclic ketones, formed as result of condensation and their physico-chemical properties, are also described. The displacement of the double bond from positions 9 to 11 and 8 to 9 was observed during the process of diene condensation. By reducing the steroid ketones, according to the Clemmensen method, only the keto-group in the A-ring is eliminated and diketone converts into 15-monoketone. Eight references: 4-USSR; 2-USA and 2-German (1929-1953).

Institution : Academy of Sciences, USSR, Institute of Organic Chemistry

Submitted : October 7, 1952

ZARETSKAYA, I. I.

USSR/Chemistry - Synthesis

Card 1/1 : Pub. 40 - 19/22

Authors : Nazarov, I. N.; Verkholetova, G. P.; Torgov, I. V.; Zaretskaya, I. I.;
and Ananchenko, S. N.

Title : Synthesis of steroid compounds and their substances. Part 20. -

Periodical : Izv. AN SSSR. Otd. khim. nauk 5, 929-940, Sep-Oct 1953

Abstract : The synthesis of steroid diketones of the cis-cis series is described. The formation of three isomeric diketones, two of which have an inverted structure and are distinguished by a spatial position of substituents, is explained. The products derived from the condensation of 1-vinyl-9-methyl- Δ^1 -6-octalone with Δ^1 -cyclopentenone and with 1,3-dimethyl- Δ^1 -cyclopentene-4,5-dione and their characteristics, are described. Nine references: 7-USSR and 2-USA (1935-1953).

Institution : Academy of Sciences USSR, Institute of Organic Chemistry

Submitted : October 7, 1952

ZARETSKAYA, I.I.

Reaction mechanisms of the cyclization by means of
carbamate. III. D. N. Kuznetsov, Z. M. Ponomareva, I. I. Zarutskiy,
and L. N. Nazarov. *Bull. Acad. Sci. USSR Div. Chem. Sci., Engl. transl.*, 1978, No. 10, 1391-1396; English translation, *J. Org. Chem.*, 1979, 44, 1391-1396. E.N.E.

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ZARETSKAYA. I. I.

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yielding 110-115 and higher opt. depts. The catalyst yielding crystals, α -ketoglutaric acid, α -ketoglutaric acid, m. 134-5. Oxidation of this with $\text{Br-H}_2\text{O}$ gave α -ketoglutaric acid, m. 134-5, which is identical with the α -ketoglutaric acid, m. 134-5, which is obtained from the same acid of 13 as the cyclic ketone. A mechanism for the cyclization is presented which is consistent with the experimental results.

G. M. Kosloski

2025-10-11

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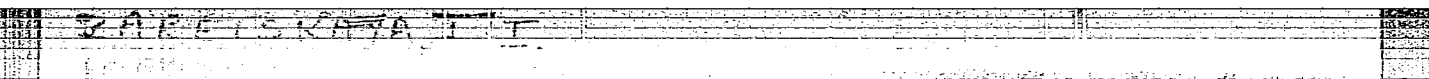
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